

different values. The revenue had no small gains from the sales, hundreds of sets being bought up and cancelled without being used.

In the course of the morning of September 9 Prof. Darwin opened the recently acquired museum, which on being entered was found to contain a local collection of great scientific interest. Many of the visitors expressed their regret that time was not available for a more minute study than was possible on this occasion. The afternoon was taken up by a visit to Government House, the site of Lobengula's kraal, where, in the absence of the Administrator, a reception was held by the Treasurer, Mr. Newton. Lobengula's tree of justice was a centre which all sought.

In the evening Mr. D. Randall MacIver gave a lecture-report on the "Rhodesian Ruins" which attracted a numerous audience, it having been whispered abroad that his conclusions ran counter to the theories of great antiquity which have hitherto generally held the field. Mr. MacIver's address was lengthy, and dealt chiefly with one class of evidence. Although the last word has not been said upon the subject, Mr. MacIver has certainly thrown new light upon it.

The Matopos and World's View, with the tomb of Cecil Rhodes and the Shangani monument, which called for two special trains to convey the visitors, seem to have surpassed all preconceptions, and the magnificence of the surrounding views and the quiet dignity of the last resting-place of Rhodes seem to have created the same feeling in the breast of nearly everyone present, a desire to contemplate the whole scene in the silence and solitude impossible on such an occasion. A brief religious service was conducted by the Rev. Mr. Bevan at the side of the tomb.

On Monday morning, September 11, five special trains left for Victoria Falls, and the journey through the teak forests seemed a fitting prelude to the solemn grandeur of the scenes to be viewed on the morrow.

Only some thirty hours were allotted to the falls visit, but such were the arrangements made by Sir Charles Metcalfe that the main features, both of the falls, the ravine below, and the river above, could be compassed by the energetic sightseer in the time.

The first business of the day was the opening of the new bridge by Prof. Darwin, after which Palm Kloof, Livingstone Island, the Rain Forest, and many other points of vantage and interest were visited. Not a few also enjoyed a moonlight visit to the falls, the moon fortunately being full. The next morning canoes were requisitioned for trips up the lovely island-dotted river, and the "hippos" were obliging enough to put in an appearance for the occasion. Soon after noon the special trains commenced the return trip to Bulawayo, the first stage on the journey home.

At Bulawayo the trip, which, save for a few special excursions, had been of a homogeneous character, was brought to an end. The party was here divided into two sections, the one preferring the voyage home by way of Cape Town, the other *via* Beira and the east coast. The latter route proved to possess the greater attractiveness, judging by the numbers who elected to return that way, which was not surprising when an opportunity of making the round journey in such circumstances was considered.

Of the visit as a whole it only remains to add that it has been a success beyond the most sanguine dreams of its promoters. The hospitality throughout has been generous to the extent of lavishness, the labour of the various local committees has been as wisely exercised as it has been unremittingly pursued, and the only regret seems to have been that the time allotted to each town was necessarily so short.

That the true interests of science both in the mother country and in the colonies have been advanced by this unique meeting of the association cannot be doubted, and the results will continue to be seen in many directions after many days.

#### THE BRITISH SCIENCE GUILD.

THE inaugural meeting of the British Science Guild will be held at the Mansion House on Monday, October 30; and the Lord Mayor, who has consented to preside, will take the chair at 4.15 p.m. The guild appeals to the people of Britain within and beyond the seas, and its chief object is to bring home to all classes the necessity of making the scientific spirit a national characteristic which shall inspire progress and determine the policy in affairs of all kinds. The organisation is associated with no political party, and its membership is open to all British subjects, whether men or women.

At the inaugural meeting of the guild, on October 30, the following officers will be proposed:

President: the Right Hon. R. B. Haldane, K.C., M.P.; vice-presidents: the Right Hon. the Lord Mayor of London, Sir Lawrence Alma-Tadema, R.A., O.M., the Right Hon. Lord Balcarres, M.P., the Right Hon. the Earl of Berkeley, Sir William Broadbent, Bart., K.C.V.O., F.R.S., Sir Walter Buller, K.C.M.G., F.R.S., Sir J. Burdon-Sanderson, Bart., F.R.S., Major-General Sir Owen Tudor Burne, G.C.I.E., K.C.S.I., Sir William Church, Bart., Sir George Sydenham Clarke, K.C.M.G., F.R.S., Sir John Colomb, K.C.M.G., M.P., the Right Hon. the Earl of Donoughmore, the Right Hon. Earl Egerton of Tatton, Sir John Eliot, K.C.I.E., F.R.S., Sir Michael Foster, K.C.B., O.M., M.P., F.R.S., the Right Hon. Sir Edward Fry, F.R.S., Sir Archibald Geikie, F.R.S., Mr. F. Du Cane Godman, F.R.S., the Right Hon. Sir John Gorst, K.C., M.P., F.R.S., the Right Hon. Lord Haliburton, G.C.B., Sir Joseph Hooker, G.C.S.I., F.R.S., the Right Hon. Viscount Knutsford, G.C.M.G., Prof. Ray Lankester, F.R.S., Dr. J. Larmor, F.R.S., the Right Hon. Lord Lister, F.R.S., Sir Charles McLaren, Bart., K.C., M.P., the Right Hon. Sir Horace Plunkett, K.C.V.O., F.R.S., Mr. E. Robertson, K.C., M.P., the Right Hon. Lord Tennyson, P.C., G.C.M.G., His Grace the Duke of Wellington, K.G., G.C.V.O.; chairman of committees: Sir Norman Lockyer, K.C.B., F.R.S.; vice-chairmen: Sir William Abney, K.C.B., F.R.S., Sir Lauder Brunton, F.R.S., the Hon. Sir John Cockburn, K.C.M.G., Sir Gilbert Parker, M.P.; trustees: the Right Hon. Lord Strathcona and Mount Royal, G.C.M.G., Sir Henry Roscoe, F.R.S.; hon. treasurer: the Right Hon. Lord Avebury, F.R.S.; hon. assist. treasurer: Lady Lockyer, 16 Penywern Road, S.W.; hon. secretary: Mr. C. Cuthbertson.

A large general committee, which will include the names of the present organising committee, will also be proposed for election.

Since the first meeting, held at the rooms of the Royal Society in April, 1904, the labours of the organising committee have been directed to securing the help of representatives of all sides of the nation's activities to secure the objects of the guild, which are

(1) To bring together as members of the guild all those throughout the Empire interested in science and scientific method, in order, by joint action, to convince the people, by means of publications and meetings, of the necessity of applying the methods of science to all branches of human endeavour, and thus to further the progress and increase the welfare of the Empire.

(2) To bring before the Government the scientific aspects of all matters affecting the national welfare.

(3) To promote and extend the application of scientific principles to industrial and general purposes.

(4) To promote scientific education by encouraging the support of universities and other institutions where the bounds of science are extended, or where new applications of science are devised.

During the first stage of the existence of the guild, the public activity of the committee was limited, by reasons of policy, because at the moment of the inception of the movement the attention of the country, and especially of Parliament, was so deeply engrossed in the fiscal problem that no other question, however important, was likely to receive due attention.

The Royal Society and British Association were founded for the promotion of natural knowledge; the Society of Arts for the encouragement of arts, manufactures, and commerce. The Science Guild, though in sympathy with these objects, is not identical in aim with any existing society. The promotion of natural knowledge is outside its sphere. Its purpose is to stimulate, not so much the acquisition of scientific knowledge, as the appreciation of its value, and the advantage of employing the methods of scientific inquiry, the study of cause and effect, in affairs of every kind. Such methods are not less applicable to the problems which confront the statesman, the official, the merchant, the manufacturer, the soldier, and the schoolmaster, than to those of the chemist or the biologist; and the value of a scientific education lies in the cultivation which it gives of the power to grasp and apply the principles of investigation employed in the laboratory to the problems which modern life presents in peace or war.

Communications may be addressed to the honorary secretary of the British Science Guild, 16 Penywern Road, London, S.W.

SIR WILLIAM WHARTON, K.C.B., F.R.S.

**WILLIAM JAMES LLOYD WHARTON**, second son of the late Mr. Robert Wharton, County Court Judge of York, was born in London on March 2, 1843. Educated at Burney's Academy, Gosport, he entered the Royal Navy in August, 1857, on board H.M.S. *Illustrious*, then recently commissioned as a training ship for naval cadets, stationed at Portsmouth. Passing with great credit out of the *Illustrious*, he was appointed in April, 1858, midshipman of H.M.S. *Euryalus*, on board which ship H.R.H. Prince Alfred (afterwards Duke of Edinburgh) was also serving. In November, 1860, being appointed to H.M.S. *Jason*, commissioned for service on the North American and West Indian stations, he was lent to H.M.S. *St. George*, employed on fishery duties in Newfoundland during the summer of 1861. On completing his time as midshipman he passed his examination in seamanship for the rank of lieutenant on January 13, 1863. Whilst still serving in the *Jason* he was made acting lieutenant of that ship on October 26, 1864, and at the close of the year, on the *Jason* returning to England to pay off, he at last had the opportunity to pass the examinations in gunnery and navigation necessary to qualify him for the rank of lieutenant. In these he acquitted himself brilliantly, being confirmed in his rank March 15, 1865. In December of that year he was awarded the Beaufort testimonial for passing the best examination of the year in mathematics, nautical astronomy, and navigation.

In the meantime, in July, 1865, he had been appointed to H.M.S. *Gannet*, a sloop commissioned partly for the general duties of the fleet, and partly for surveying service on the North American and West Indian stations, but acting entirely under the orders of the Commander-in-Chief. In that ship he acquired his first experience in the work to which his life was afterwards devoted, receiving the commendation of the Board of Admiralty for the zeal displayed by him

on the work performed in the Bay of Fundy. The *Gannet* paid off in November, 1868.

The interest of the Commander-in-Chief, Vice-Admiral Sir James Hope, having been aroused by the ability and industry shown by Lieut. Wharton whilst serving in the *Gannet*, as well as by the distinction which he had gained in passing his examinations, when the admiral hoisted his flag at Portsmouth he offered to Wharton the appointment of flag lieutenant. The hydrographer had meanwhile promised to submit his name as second lieutenant of H.M.S. surveying vessel *Newport*; Wharton consequently considered that his services were pledged to the Surveying Service, although by adhering to it he was fully aware that he would sacrifice the prospect of certain promotion at the end of three years, but this he was prepared to do. Sir James Hope, however, took another view, and speedily arranging matters with the hydrographer, Wharton was appointed as his flag lieutenant on March 1, 1869. Whilst so employed he wrote "The History of H.M.S. *Victory*," which still commands a steady sale to the public, the proceeds being devoted to the R.N. Seamen's and Marines' Orphans' Home, Portsmouth.

In November, 1870, H.M.S. *Urgent* being fitted out to convey astronomers to the neighbourhood of Gibraltar to observe the forthcoming total eclipse of the sun, Sir James Hope gratified his flag lieutenant by permitting him to accompany the expedition as first lieutenant of the ship. He was promoted to commander March 2, 1872, on Sir J. Hope striking his flag, and the following month saw him appointed to the command of H.M. surveying vessel *Shearwater*, first on the Mediterranean station and afterwards on the east coast of Africa. In the Mediterranean his work was chiefly distinguished by a valuable contribution to science in the form of an investigation of the surface and undercurrents in the Bosphorus, settling at rest the many controversies respecting the exhaustless flow of water from the Black Sea to the Sea of Marmora by proving that an undercurrent existed as strong as that on the surface, but which invariably flowed in exactly an opposite direction. His report, which was officially published, may be considered as prescribing the method for similar inquiries. Whilst at Rodriguez, in the South Indian Ocean, he took part in observing the transit of Venus in 1874. The *Shearwater* was paid off in July, 1875, and in June the following year he commissioned the *Fawn* for surveying service in the Mediterranean, Red Sea, and east coast of Africa. Starting with a staff of officers most of whom were wholly inexperienced, Commander Wharton set himself to train them after his own ideals, and succeeded in imbuing his assistants with something of his untiring energy and love of the work. Whilst exacting the utmost that each individual was capable of giving to the service, he exercised unremitting patience and forbearance, and throughout a prolonged commission of four and a half years endeared himself to all who had the happiness to serve under him. He was sympathetic and considerate towards both officers and men, and entered heartily into all schemes for their recreation when opportunity offered. This commission of the *Fawn* was perhaps one of the most successful, as it certainly was one of the happiest, ever spent by a surveying vessel in modern times. The last two years were occupied with the survey of the Sea of Marmora, an excellent piece of work for which he and his officers received an expression of their Lordships' approbation.

On January 29, 1880, Wharton was promoted to captain, and the *Fawn* paid off at Malta at the end of the year.